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[10191/2334]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Herbert ROECKEL et al.  
Serial No. : To Be Assigned  
Filed : Herewith  
For : DEVICE FOR DETERMINING AT LEAST ONE  
PARAMETER OF A FLOWING MEDIUM  
Art Unit : To Be Assigned  
Examiner : To Be Assigned

Assistant Commissioner for Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT AND  
37 C.F.R. § 1.125 SUBSTITUTE SPECIFICATION STATEMENT**

SIR:

Please amend the above-identified application before examination, as set forth below.

**IN THE SPECIFICATION AND ABSTRACT:**

In accordance with 37 C.F.R. § 1.121(b)(3), a Substitute Specification (including the Abstract, but without claims) accompanies this response. It is respectfully requested that the Substitute Specification (including Abstract) be entered to replace the Specification of record.

**IN THE CLAIMS:**

On the first page of the claims, first line, change "What is claimed is:" to  
--WHAT IS CLAIMED IS:--.

Please cancel, without prejudice, claims 1 to 25 in the underlying PCT  
application.

EL594613445

Please add the following new claims:

--26. (New) A device for determining at least one parameter of a medium flowing in a line, comprising:

a sensor carrier;

at least one sensor element arranged on the sensor carrier, the sensor element configured to be introduced into the flowing medium and to determine the parameter;

wherein the sensor carrier is a separate component secured in the device.

27. (New) The device according to claim 26, further comprising:

a support part; and

a measuring housing provided in the line and joined to the support part, the measuring housing including a bypass channel, the sensor element arranged in the bypass channel, the sensor carrier secured in the bypass channel.

28. (New) The device according to claim 26, further comprising:

a support part, the sensor carrier secured in the support part; and

a measuring housing provided in the line and joined to the support part, the measuring housing including a bypass channel, the sensor element arranged in the bypass channel.

29. (New) The device according to claim 26, further comprising:

a support part, a base support arranged in the support part, the sensor carrier secured to the base support; and

a measuring housing provided in the line and joined to the support part, the measuring housing including a bypass channel, the sensor element arranged in the bypass channel.

30. (New) The device according to claim 26, wherein the sensor carrier includes an aerodynamically formed oncoming-flow edge directed contrary to the flowing medium.

31. (New) The device according to claim 26, wherein the sensor carrier includes a sensor cavity, the sensor element disposed in the sensor cavity, the sensor cavity forming a frame element and retaining element for the sensor element and including a sensor cavity bottom.

32. (New) The device according to claim 26, wherein the medium flows in a main flow direction, the sensor carrier one of formed and aligned with respect to the main flow direction of the flowing medium so that a vector of the main flow direction one of is in a plane of a sensor region of the sensor element and intersects the plane of the sensor region at one of a small positive and negative angle.

33. (New) The device according to claim 31, wherein the sensor carrier includes a surface in which the sensor cavity is located, the surface arranged approximately at a same level as a bottom of the base support.

34. (New) The device according to claim 31, wherein the sensor carrier includes a surface in which the sensor cavity is located, dimensions of the sensor cavity corresponding at a level of the surface of the sensor carrier approximately to dimensions of the sensor element so that the sensor element is configured to be introduced flush into the sensor cavity and so that the medium flows one of scarcely and not at all below the sensor element into the sensor cavity.

35. (New) The device according to claim 31, wherein the sensor cavity includes two opposite longitudinal edges, a gap having an order of magnitude of a few micrometers formed between a periphery of the sensor element and the longitudinal edges.

36. (New) The device according to claim 31, wherein the sensor carrier includes a surface in which the sensor cavity is located, dimensions of the sensor cavity corresponding approximately to dimensions of the sensor element so that the sensor element is flush with respect to the surface of the sensor carrier.

37. (New) The device according to claim 26, further comprising:  
a support part; and  
a measuring housing provided in the line and joined to the support part, a common longitudinal axis of the support part and the measuring housing extending perpendicular to a main flow direction, the measuring housing including a bypass channel extending from an inlet port and an inlet channel, a diverting channel adjoined to the inlet channel and configured so that the medium flows from the inlet channel into the diverting channel, via an

outlet channel to an outlet port to discharge at an outer surface of the measuring housing into the line.

38. (New) The device according to claim 31, wherein the sensor element is glued to the sensor cavity bottom.

39. (New) The device according to claim 31, wherein at least one adhesive displacement space is configured in the sensor cavity bottom as a channel that extends in a direction from one longitudinal edge of the sensor cavity bottom arranged parallel an oncoming-flow edge of the sensor cavity to an opposite longitudinal edge, the adhesive displacement space configured so that adhesive introduced into the sensor cavity is spread upon insertion of the sensor element into the sensor cavity of the sensor carrier, the channel dividing the sensor cavity bottom into a bearing surface configured to receive adhesive and a sensor base area arranged below a membrane of the sensor element.

40. (New) The device according to claim 39, wherein a cut-out is arranged in each longitudinal edge of the sensor cavity in a region of the bearing surface, the longitudinal edges one of arranged parallel and slightly inclined with respect to the oncoming-flow edge of the sensor carrier, the cut-out configured so that an adhesive bead applied therein is forced out upon insertion of the sensor element into the sensor cavity so that a gap between the sensor element and the sensor cavity at the one longitudinal edge, a gap contiguous thereto between the sensor element and the bearing surface and a gap contiguous thereto at the opposite longitudinal edge are completely closed by the adhesive of the adhesive bead.

41. (New) The device according to claim 40, further comprising:  
a cover;

a dividing wall connected to the cover and extending with a free end to the surface of the sensor carrier, the cut-outs in the longitudinal edges of the sensor cavity extending in a direction of the dividing wall and are at least partially covered by the dividing wall.

42. (New) The device according to claim 31, further comprising at least one spacer in the form of an elevation arranged in the sensor cavity bottom of the sensor cavity.

43. (New) The device according to claim 26, wherein the sensor carrier is made of plastic.

44. (New) The device according to claim 43, wherein the plastic includes one of a liquid crystal polymer and a partial crystalline, aromatic thermoplastic.

45. (New) The device according to claim 26, wherein the sensor carrier is made of ceramic.

46. (New) The device according to claim 38, wherein the adhesive is configured to seal the bypass channel and the electronics space.

47. (New) The device according to claim 38, wherein a channel end face of the sensor carrier adjoins the bypass channel by form locking.

48. (New) The device according to claim 26, wherein at least one of a longitudinal axis of the sensor carrier is inclined by an angle and a longitudinal axis of the sensor element is inclined by an angle with respect to a longitudinal axis of the support part.

49. (New) The device according to claim 26, wherein the sensor carrier is secured in the device by an adhesive.

50. (New) The device according to claim 26, wherein the sensor carrier is secured in the device by a press-fit.

51. (New) The device according to claim 26, wherein the medium includes intake air of an internal combustion engine.--.

#### **REMARKS**

This Preliminary Amendment cancels without prejudice original claims 1 to 25 in the underlying PCT Application No. PCT/DE01/02761, and adds without prejudice new claims 26 to 51. The new claims conform the claims to U.S. Patent and Trademark Office rules and do not add new matter to the application.

In accordance with 37 C.F.R. § 1.121(b)(3), the Substitute Specification (including the Abstract, but without the claims) contains no new matter. The amendments reflected in the Substitute Specification (including Abstract) are to conform the Specification and Abstract to U.S. Patent and Trademark Office rules or to correct informalities. As required by 37 C.F.R. § 1.121(b)(3)(iii) and § 1.125(b)(2), a Marked-Up Version of the Substitute Specification comparing the Specification of record and the Substitute Specification also accompanies this Preliminary Amendment. Approval and entry of the Substitute Specification (including Abstract) is respectfully requested.

The underlying PCT Application No. PCT/DE01/02761 includes an International Search Report, dated December 11, 2001. The Search Report includes a list of documents that were uncovered in the underlying PCT Application. A copy of the Search Report accompanies this Preliminary Amendment.

Applicants assert that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully Submitted,

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Dated: MARCH 26, 2002

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